§ 239. **Vitis.**—*Vitis cordifolia* L., and V. *riparia*, Michx., are still mixed up in the opinion of many of our botanists, and trouble them, whenever they are obliged to touch them. The observations made this spring have again confirmed my long settled conviction of their absolute specific difference, and may help others to better distinguish them.

Vitis riparia was in bloom here in the last week in April, and in favorable localities (on the rocky, sun-exposed banks of the Mississippi,) even before the 20th of that month. *V. cordifolia* bloomed fully four weeks later, and even into this month of June, long after *Labrusca*, and a little before *aestivalis*. As this spring was an unusually early one, it is better to compare their flowering with that of well know trees; thus *riparia* bloomed after the apple-tree, and about the time when the first garden roses and the first Acacia (Robinia) blossoms made their appearance; *cordifolia* bloomed when the flowers of Ailantus exhaled their nauseous odor and Catalpa blossoms were just opening.

The young, half-grown leaf of *riparia* is glossy shining (on the upper surface) and is supported by a pair of conspicuous, white, membranaceous stipules, oblong or linear-oblong, two or three lines in length; the mature leaf is scarcely wrinkled, and of a bright deep green color, and usually has a broad, at the base truncate, sinus.

The leaf of *cordifolia* is always dull, even when young, perfectly smooth, and paler green, and its rounded short stipules are mostly less than one line in length; the sinus, though it may be wide, is always acute.

I need not repeat that the shape of the leaves in typical specimens is distinct enough, but that forms occur, which, without the help of other characters, it would be difficult to keep apart; and this made undoubtedly the great difficulty in the distinction of both species.

There is generally a hairy (rarely cottony, as in *Labrusca* and *aestivalis*) pubescence on the under side of young leaves especially along the ribs; more so in *cordifolia*, less in the other species; in the former this pubescences sometimes remains throughout the season, and rarely even verges to the arachnoid down of *aestivalis*.

In this neighborhood *riparia* matures its fruit in July and August, further north in September, earlier than even *aestivalis; cordifolia* not bfore October.

Now, having distinguished the species, let us see about their geographical distribution. *Riparia* is the northern and western, *cordifolia* the southern and eastern form; in the middle or central States they both occur together. I have found *riparia* on the great Lakes, on Niagara, on Lake George, and have it from Vermont; it is common in Missouri and Illinois, and extends to the Rocky Mountains of Wyoming, Colorado and New Mexico. How far south of the Ohio it is found I have now no means of ascertaining.

V. cordifolia is common throughout the Middle and Southern States, but I have seen no specimen north of New York, nor west of Missouri.

I may add that *V. aestivalis* extends through the whole Vitis region of North America, from New England to Texas and from the

Atlantic to the great plains, but not to the mountains beyond. *V. Labrusca* is our most local species, being confined to the Alleghany Mountains and the region between them and the Atlantic, unknown in the Mississippi Valley or beyond. Whatever has been called so there, or in Louisiana or Texas, is a large and downy leaved form of *aestivalis*, always readily distinguished by its "intermittent" tendrils, while *Labrusca* has more or less "continuous" tendrils.

Will local botanists assist me to more accurately define the geographical limits of our species of Vitis? And may I request them to collect fertile flowers as well as sterile, the only ones found in most herbaria?

ST. LOUIS, June. G. ENGELMANN.

§ 240. **Botrychium simplex, Hitch, in Mass.**—I have received from Mr. E. S. Wheeler of Berlin, Mass., a specimen that proves to be good B. simplex Hitch. The specimen represents Milde's "*forma incisa*" and was found growing with a few others in a sandy plain. This is the first instance of genuine specimens of this rare fern being found in Massachusetts since Dr. Torrey's Deerfield specimen—date unknown—many years ago, and its rediscovery now will give to our botanists an additional stimulus to exert themselves still further in the search for additional stations.

Since I sent the above I have personally verified the rediscovery. There were in all about 125 plants growing on an exposed sandy plain, where the spores may have been blown from some of the higher hilly regions of the surrounding country. The specimens were all small, and it would seem as if the station could not have been there a very long time, probably, allowing three years growth from spores, and two for the largest form above ground, not more than five or six years, or there would have been some more fully developed plants.

I am now desirous of obtaining southern and western forms of all of our Botrychia and will be very grateful to any one who will favor me with specimens.

If I can make any return it will afford me much pleasure to do so. GEO. E. DAVENPORT.

§ 241. **Herb. Mass. Hor. Society.**—The collection of N. American Ferns which I have prepared for this Herbarium being about complete, I now propose adding to it the remaining *Vasculur Cryptogamic* plants of the United States, and respectfully solicit specimens from the botanists of the country for that purpose. Any specimens sent will be thankfully acknowledged, and placed in the Herbarium with donor's name and ticket, and, whenever possible, I shall be glad to supply any desiderata.

GEO. E. DAVENPORT, 8, Hamilton Place, Boston, Mass.

§ 242. **Musci Appalachiani. Supplement I.**—Tickets of 100 specimens of Mosses collected mostly in the Eastern part of North America, by Coe F. Austin, Closter, N. J., price 25 cents. Mr. Austin's supplementary collection is now ready for distribution, at $6 the hundred species, each represented by from ten to fifty specimens.

§ 243. **New Localities.**—Mr. Hall writes us that he found, about